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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,607	09/15/2003	Douglas Robert Farrenkopf	100-23000 (P05670)	2361
33402	7590	02/25/2005	EXAMINER	
LAW OFFICES OF MARK C. PICKERING			LEJA, RONALD W	
P.O. BOX 300			ART UNIT	
PETALUMA, CA 94953			PAPER NUMBER	
			2836	

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,607

Applicant(s)

FARRENKOPF, DOUGLAS
ROBERT

Examiner

Ronald W. Leja

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/15/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Claims 7 and 15 are objected to because of the following informalities: In line 2 of Claim 7, "fourth" should more properly be "fifth" and in Claim 15, line 2, "a bipolar transistor" should more properly be "a MOS transistor". Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 and 8-15 are rejected under 35 U.S.C. 102(a) as being anticipated by Ker et al. (US2003/0147190).

Figure 6 discloses an ESD protection circuit comprising an (1), first bipolar transistor (Q1), a second transistor (Mn) and delay line via (RC) connected to a power supply pad (1); a first resistive device (R_B); see Page 1 from [0013] through Page 2, line 8; see Page 3, paragraphs [0035] and [0042].

4. Claims 1-4, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (6,400,540).

Chang discloses in Figure 5, an ESD protection circuit comprising an (OUTPUT PAD), first bipolar transistor (B3), and some circuitry to be protected (i.e. P81, N82) (see also Col. 6, lines 33-56); a second transistor (MOS transistor P1) and delay line via (300) connected to a power supply pad (VDD).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 5-11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang.

Claims 5 and 11 add that the delay line has a delay period being greater than a period of an ESD event. Although Chang does not specifically disclose this limitation, the gist of Chang is to offer ESD protection to other vulnerable circuitry connected to the pad and elsewhere on the chip. The disclosed delay is to prevent bipolar transistor (B3) from turning-off before the ESD event finishes, thereby protecting the sensitive components. Therefore, in the same vein of choosing the sizes of (P1) and (B3) so as to handle the ESD event (Col. 6, lines 50-54), it would have been obvious to choose the delay such that (P1) and (B3) can complete their job of shunting the ESD event, and thus, have a delay period greater than an anticipated ESD event, thereby helping to ensure the desired protection.

Claims 6-8 essentially add the use of the first and second resistors. Chang does not disclose the use of such resistors. However, the use of a first and second resistor, respectively connected between base and GND and between gate and GND, for the respective first and second transistors, would have been obvious as a

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means to maintain base and gate potentials, thereby ensuring turn-on during the ESD event.

7. The Prior Art made of record and not relied upon is considered pertinent to Applicant's disclosure. Metz et al. (5,400,202).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald W. Leja whose telephone number is (571)272-2053. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ronald W Leja
Primary Examiner
Art Unit 2836

2/20/05

rwl
February 20, 2005